BUDGET ITEM JUSTIFICATION SHEET P-40											DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY: **OTHER PROCUREMENT, NAVY** **BA4: ORDNANCE SUPPORT EQUIPMENT**					P-1 ITEM NOMENCLATURE **NATO SEASPARROW 523700**							
Program Element for Code B Items:					Other Related Program Elements **Ship Self Defense 0604755N Proj 20173**							
	FY 2002 and Prior	ID Code	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		To Complete	Total Program
QUANTITY												
COST ($M)	$10.5		40.5	32.6	25.5	40.7	7.0	30.8	14.5		cont	$202.1
Initial Spares ($M)	$0.0		$0.0	$0.8	$2.1	$1.5	$0.4	$0.5	$0.2		cont	$5.5

PROGRAM OVERVIEW:

NATO SEASPARROW Surface Missile System (NSSMS) NATO SEASPARROW is a Self Defense AAW Shipboard Missile System.
Primary operations consist of:

- Acquiring targets from external or internal designations
- Establishing track data for Engageability Determination and Launcher/Missile Control
- Target Illumination for Missile Guidance
- Missile Firing
- Kill/Survive Assessment

Provides fully automatic operation with provisions for Operator Intervention or Override from the time of Target Designation to Missile Away. The NSSMS consists of a Fire Control System comprised of Directors; a General Purpose Digital Computer; Signal Data Converters; Transmitter Group; Operating Consoles, and an 8 Cell Launcher, which employs the surface launch variant of the Sparrow Missile. The Surface Launch Version (RIM-7) uses a Radar Homing Guidance System, with Target Illumination provided by the shipboard MK91 System Radar Directors.

When NSSMS is combined with the MK23 Target Acquisition System (TAS), they become the AN/SWY-1 Self Defense Surface Missile System for the following U.S. Navy Ships: AOE/AORs, DD963s, Self Defense Test Ship, and shore based facilities. When the MK23 TAS is combined with RAM it becomes AN/SWY-2 on the LHA's. When NSSMS and TAS and RAM are combined it becomes the AN/SWY-3 on CV/CVNs and LHDs. The NSSMS is a NATO Cooperative Project with 12 participating Governments; Australia, Belgium, Canada, Denmark, Germany, Greece, Norway, The Netherlands, Portugal, Spain, Turkey and the United States. The NSSMS and associated systems of the Cooperative Project were developed, produced and are supported under DoD/MoD level International Memorandum of Understanding (MOU).

FY 2003: Introduces production start-up for the MK57 Mod 10/11 NATO SEASPARROW Surface Missile System (NSSMS) after a two year production break. The funding provides for the procurement of 3 ship sets (one LHD and two CVNs) of the MK57 Mod 10/11 NATO SEASPARROW Surface Missile System (NSSMS) ReArchitecture upgrades. Provides for engineering changes necessary to keep the MK57 Mod 10/11 NATO SEASPARROW Surface Missile System (NSSMS) ReArchitecture upgrades current with technical change requirements and obsolescence issues. The MK57 Mod 10/11 NATO SEASPARROW Surface Missile System (NSSMS) (RNSSMS) creates an open architected system fully compatible with the SSDS MK 2 integrated ship defense suite. This effort consists of replacing the computer complex with state-of-the-art COTS hardware, replacing the Firing Officer Console and Radar Set Console functionality into the Navy standard AN/UYQ-70 display consoles, replacing the Signal Data Processor with state-of-art microprocessors, and upgrading the transmitter to solid state technology. These modifications are part of the overall Maritime Force Protection Package and will allow for full exploitation of the capabilities of the future ESSM, as well as provide reductions in Cost of Ownership and watch station requirements. The RNSSMS modifications will be installed on CV/CVNs, and LHD Class ships. This funding also provides for the U.S. share of consortium efforts.

Installation of RNSSMS will be performed at the shipyards during scheduled availabilities.

BUDGET ITEM JUSTIFICATION SHEET **P-40 Continuation**	**DATE:** **February 2004**
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY/BA4 ORDNANCE SUPPORT EQUIPMENT**	P-1 ITEM NOMENCLATURE **NATO SEASPARROW 523700**
Program Element for Code B Items:	Other Related Program Elements **Ship Self Defense 0604755N Proj 20173**

PROGRAM OVERVIEW:

FY 2004: The funding provides for the procurement of 1 CVN ship sets of the MK57 Mod 11 NATO SEASPARROW Surface Missile System (NSSMS) ReArchitecture upgrade. It provides for engineering changes necessary to keep the NSSMS ReArchitecture upgrade current with technical change requirements and obsolescence issues.

The MK57 Mod 11 NATO SEASPARROW Surface Missile System (NSSMS) creates an open architected system fully compatible with the SSDS MK 2 integrated ship defense suite. This effort consists of replacing the computer complex with state-of-the-art COTS hardware, replacing the Firing Officer Console and Radar Set Console functionality into the Navy standard AN/UYQ-70 display consoles, replacing the Signal Data Processor with state-of-art microprocessors, and upgrading the
transmitter to solid state technology. These modifications are part of the overall Maritime Force Protection Package and will allow for full exploitation of the capabilities of the future ESSM, as well as provide reductions in Cost of Ownership and watch station requirements. The RNSSMS modifications will be installed on CV/CVNs, with upgrades being procured & installed on existing RNSSMS and CVN 68 Class ships. This funding also provides for the U.S. share of consortium efforts.

Introduction of the Production start-up ORDALT to the GMLS Mk 29 Trainable Launcher in support of a Fleet deployable Evolved SEASPARROW Missile (ESSM) . This ORDALT will provide the CV/CVN Class ships with a cost-effective means of employing ESSM. Production Start- Up is scheduled for FY 04. Final development and qualification testing is expected to start with contract award in 3rd Qtr FY 04 and will continue for approximately 15 months to minimize the risk of hardware changes. Suitability Testing will continue into FY 06.

FY 2005: The funding provides for the limited production support for REARCH and the U.S. share of NSSMS consortium support. Upgrades procured and installed for existing RNSSMS on LHD 7. Continued production of ESSM Ordalt to the GMLS MK 29 Trainable Launcher.

CLASSIFICATION: **UNCLASSIFIED**

	WEAPONS SYSTEM COST ANALYSIS P-5													DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA4 ORDNANCE SUPPORT EQUIPMENT						P-1 ITEM NOMENCLATURE/SUBHEAD NATO SEASPARROW / 523700								SUBHEAD: A4US
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS FY 2002 and Prior				FY 2003			FY 2004			FY 2005		
			Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
US003	**NSSMS IMPROVEMENTS/ CONSORTIUM SUPPORT ***		4.182						4.275			4.176			4.217
US004	**MK 91 Rearchetecture System MODIFICATION**		6.054						35.610			22.822			8.059
US005	**MK 29 GMLS ESSM ORDALT**											4.220			2.926
US900	**CSS**		0.257						0.338			0.350			0.300
US5IN	**EQUIPMENT INSTALLATION**								0.317			0.986			9.951
			10.493						**40.540**			**32.554**			**25.453**

* Consortium funding not reflected in P-3s

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 2004
B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE NATO SEASPARROW	SUBHEAD: A4US

Cost Element/ FISCAL YEAR	QUANTITY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	DATE REVISIONS AVAILABLE
FY 03 1/										
US004										
MK 91 REARCH	2	CVN-4.75M	NAVSEA	Oct-02	FFP	Raytheon, Ports, Ri	Apr-03	Nov-04	YES	
UPGRADE	1	LHD 3.0M								
Transmitter Upgrade	10	1.2M	NAVSEA	Oct-02	FFP	Raytheon, Ports, RI	Mar-03	Oct-04	YES	
AN/UYQ-70 **2/**	13	300	NAVSEA	**2/**	FFP	Lockheed Martin	May-03	Oct-04	YES	
DISPLAY CONSOLE						Egan, MN				
FY 04										
US004										
MK 91 REARCH UPGRADE	1	CVN-5.0M	NAVSEA	Jan-04	FFP	Raytheon, Ports, RI	Jan-04	Jul-05	YES	
Transmitter Upgrade	4	1.3M	NAVSEA	Aug-03	FFP	Raytheon, Ports, RI	Jan-04	Jul-05	YES	
AN/UYQ-70 **2/**	5	300	NAVSEA	**2/**	FFP	Lockheed Martin	Jun-04	Jan-05	YES	
DISPLAY CONSOLE						Egan, MN				
MK 91 REARCH UPGRADE TO MOD 10/11 **3/**	3	2.0M	NAVSEA	Jan-04	FFP	Raytheon, Ports, RI	Jan-04	Jul-05	YES	
US005										
Mk 29 GMLS ESSM OrdAlt - Production	3	1.0M	NAVSEA	Aug-03	FPI	Raytheon, Ports, RI	Jul-04	Feb-06	NO	
FY 05										
US004										
MK 91 REARCH UPGRADE TO MOD 10/11 **3/**	1	LHD-2.0M	NAVSEA	Jan-04	FFP	Raytheon, Ports, RI	Jan-06	Jul-07	YES	
US005										
GMLS Mk29 ESSM OrdAlt - Production	2	1.0M	NAVSEA	Aug-04	FFP	Raytheon, Ports, RI	Jul-05	Feb-07	NO	

1/ Requires contractor production startup after three year production hiatus. Last production contract in late FY99
2/ Part of multicustomer contract.
3/ Procures upgrades for the MK 57 MOD 6/7 on CVN 68/69/76 & LHD 7 to make them MOD 10/11

DD Form 2446-1, JUL 87

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE:

MODELS OF SYSTEM AFFECTED: **NATO SEASPARROW** TYPE MODIFICATION: Performance, Reliability and Safety **NSSMS MK57 MOD 10/11**

Surface Missile Systems

DESCRIPTION/JUSTIFICATION:

The MK 91 NATO Seasparrow ReArchitecture Program will integrate the NSSMS into the SSDS MK 2 architecture to provide an additional layer of ship missile defense. The upgrade will eliminate the analog point to point architecture and other deficiencies resident to the existing MK 57 NSSMS, as well as allow for full exploitation of ESSM. In addition to reductions in manning realized by RNSSMS, the Solid State Transmitter Ordalt and replacement for the SDP will reduce NSSMS Cost of Ownership for the fleet.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	$
FINANCIAL PLAN (IN MILLIONS)																			
RDT&E																			0.0
PROCUREMENT																			
INSTALLATION KITS																			0.0
INSTALLATION KITS - UNIT COST																			
INSTALLATION KITS NONRECURRING																			
EQUIPMENT *		2.9	3	28.4	1	11.7			1	13.2	1/		1	14.3			2	26.2	96.7
EQUIPMENT NONRECURRING		6.0		2.2				0.1		6.0				2.6		2.3			19.2
ENGINEERING CHANGE ORDERS		3.0		1.1		1.2		1.3		1.3				0.7		0.7			9.3
SYSTEM UPGRADE 2/					3.0	6.0	1	2.0											8.0
TRAINING EQUIPMENT																			0.0
SUPPORT EQUIPMENT																			
OTHER-PRODUCTION SUPPORT		0.9		3.4		3.4		3.4		3.5		1.1		2.3		2.4			20.4
OTHER - CSS		1.0		0.3		0.4		0.3											2.0
OTHER				0.6		0.6		0.6		0.6				0.7		0.7			3.8
INTERIM CONTRACTOR SUPPORT																			
INSTALL COST				0.3		1.0	3	10.0	1	5.0		1.8		0.5	1	4.4	3	13.4	36.4
TOTAL PROCUREMENT		13.8		36.3		24.3		17.7		29.6		2.9		21.1		10.5			195.7

***Reflects Qty of Ship Sets**

1/ Relflects PBD130 which realigned CVN70 from SCN to OPN with all associated costs.

2/ Procures upgrades for the MK 57 MOD 6/7 on CVN 68/69/76 & LHD 7 to make them MOD 10/11

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: NATO SEASPARROW MODIFICATION TITLE: **NSSMS MK57 MOD 10/11**

INSTALLATION INFORMATION: Surface Msl Sys

METHOD OF IMPLEMENTATION: S/A 8740/8741

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2002: FY 2003: Apr 03 FY 2004: Jan 04 FY 2005: Jan 05 2/

DELIVERY DATE: FY 2002: FY 2003: Nov 04 FY 2004: Jul 05 FY 2005: Jul 06

($ in Millions)

Cost:	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		total
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	
SYSTEM UPGRADES								0.3	1	1.3	3	1.6					4	3.2
FY 2001 EQUIPMENT																		0.0
FY 2002 EQUIPMENT																		0.0
FY 2003 EQUIPMENT 1/				0.3		0.8	2	9.4									2	10.5
FY 2004 EQUIPMENT						0.2		0.3	1	3.8							1	4.3
FY 2005 EQUIPMENT																		0.0
FY 2006 EQUIPMENT												0.2		0.3	1	4.0	1	4.5
FY 2007 EQUIPMENT																		
FY 2008 EQUIPMENT														0.2		0.3		0.5
FY 2009 EQUIPMENT																0.2		
TO COMPLETE																	3	11.1

INSTALLATION SCHEDULE:

	FY 2001 & Prior	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	FY 2006 1	2	3	4	FY 2007 1	2	3	4	FY 2008 1	2	3	4	TC	TOTAL
IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	8
OUT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	5	8

1/ Design Service Allocation (DSA) planning $ for installation begin in year of procurement with full installation funding 2 years after procurement

2/ The FY 05 Procurement is for Transmitter Upgrades which will deliver in June 06.

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: MK 29 GMLS ESSM ORDALT

MODELS OF SYSTEM AFFECTED: **NSSMS MK 29 Launching SYSTEM** TYPE MODIFICATION: Performance

DESCRIPTION/JUSTIFICATION:

The objective of this issue is a cost-effective solution to protect CVNs IAW the Navy's Maritime Force Protection (MFP) program for ship's self defense against the future threat of evolving Anti-Ship Cruise Missiles (ASCMs). The Navy's MFP plan calls for these platforms to carry ESSM to provide the required Probability of Raid Annihilation (PRA). The ESSM OrdAlt to the GMLS Mk 29 provides a low cost modification to the current trainable launcher. In conjunction with ESSM, this modification will meet performance requirements for all cited ship classes through the mid-term scenario as defined in the CAPSTONE requirements and the 1999 Report to Congress

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	$
FINANCIAL PLAN (IN MILLIONS)																			
RDT&E						8.8		3.0											11.8
PROCUREMENT																			0.0
INSTALLATION KITS																			0.0
INSTALLATION KITS - UNIT COST																			0.0
INSTALLATION KITS NONRECURRING																			0.0
EQUIPMENT					2	2.0	2	2.0	6	6.2			6	6.4			4	4.5	21.1
ORDALT INSTALL @ DEPOT 2/							3	0.5	2	0.3	6	1.0			6	1.0	4	0.6	3.4
ENGINEERING CHANGE ORDERS						0.1		0.1		0.1		0.1		0.1		0.1		cont	0.6
DATA																			0.0
TRAINING EQUIPMENT - LBTS (1 LAUNCHER)					1	1.0													1.0
SUPPORT EQUIPMENT																			0.0
OTHER-PRODUCTION SUPPORT						1.1		0.3		0.3		0.3		0.3		0.3		cont	2.6
OTHER - CSS																			0.0
OTHER																			0.0
INTERIM CONTRACTOR SUPPORT																			0.0
INSTALL COST 1/									2	0.2	2	0.2	4	0.4	2.0	0.2	4	0.4	1.4
TOTAL PROCUREMENT		0.0		0.0		4.2		2.9		7.1		1.6		7.2		1.6		5.5	30.1

1/ Reflects cost of installing ORDALTs into launcher prior to ship installation.

2/ Reflects cost to upgrade CVN68 from MOD 7 to MOD 11 Baseline. This upgrade is necessary to fire ESSM Missiles.

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: NATO SEASPARROW MODIFICATION TITLE: **MK 29 GMLS ESSM ORDALT**

INSTALLATION INFORMATION: Surface Msl Sys

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2004: Jan 04 FY 2005: Jan 05 FY 2006: Jan 06 FY 2007: Jan 07

DELIVERY DATE: FY 2004: Jul 05 FY 2005: Jul 06 FY 2006: Jul 06 FY 2007: Jul 08

($ in Millions)

Cost:	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	
PRIOR YEARS																		
FY 2001 EQUIPMENT																		
FY 2002 EQUIPMENT																		
FY 2003 EQUIPMENT																		
FY 2004 EQUIPMENT *									2	0.2							2	0.2
FY 2005 EQUIPMENT											2	0.2					2	0.2
FY 2006 EQUIPMENT													4	0.3			4	0.3
FY 2007 EQUIPMENT															2	0.2	2	0.2
FY 2008 EQUIPMENT																		
FY 2009 EQUIPMENT																		
TO COMPLETE																	10	0.8

* Equipment = Ship Sets - Cost reflects work done on ship for installing MK 29 ESSM ORDALT.

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2002				FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	3	3	4	1	2	3	4		
IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	1	0	0	5	10
OUT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	5	10